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U.S. National Parks and “The Tragedy of the Commons”

A contribution to the characterization of U.S. mountain guides’ professional practice

Séverine Wozniak and Arnaud Buchs

- 1 U.S. National Parks have experienced a growing number of visitors from the end of the Second World War, thus bringing about the Mission 66 development program implemented in the 1950s and 1960s by the successive administrations. The program, which ended in 1966 for the centennial of the National Park Service (NPS), included “physical improvements, restoration of park resources, increased staffs for protection and interpretation, and additional lands to round out the system” (Jameson, 1980); it eventually cost over a billion dollars. The NPS is today considered as part of the American heritage. Nevertheless the current management of U.S. protected land is problematic, as it has raised a significant number of controversial issues (e.g., Milton Friedman vs. Martin Weisbrod in the 1960s). Among them the situation of the professionals who work in the parks can be mentioned, such as mountain guides, who are confronted with the existing system of permits and concessions.
- 2 From a methodological standpoint, this research is two-fold and articulates a theoretical approach, grounded in the field of environmental economics, as well as an empirical study. It aims at cross-examining the regime of property rights applied to National Parks, which are often seen as club goods whereas, in fact, they can also be considered as public goods. Our objective is to contribute to the discussion regarding the appropriate management of such areas by illustrating that all parties would certainly benefit from a greater involvement of local stakeholders in the definition of parks’ access rules and management.
- 3 This research was led in the context of a broader project aiming at outlining the professional community of U.S. mountain guides, its discourse and language (Wozniak, 2011). The data used in this research were gathered during a fieldwork study in the Boulder area, Colorado, in July 2009. We were able to collect expert documents (internal

documents used by guide services, such as application and waiver forms, permits, etc.) and to access the archive of the American Mountain Guides Association (AMGA). Fifteen interviews (with professional mountain guides, AMGA Board members, conservationists and park rangers) were carried out in an attempt to understand the various facets of this complex situation.

- 4 This paper aims at presenting the stakes pertaining to the access to protected land in the United States and to its conservation, through the analysis of the professional practice of U.S. mountain guides. Mountain guides work in these areas managed at the federal or local levels. As professionals, they are involved in the making of the rules that organize the access to these lands and ensure their preservation. First, the general context of this research is introduced —U.S. mountain guides and the preservation of the environment. Then, our theoretical framework, more particularly Garrett Hardin’s paper, “The Tragedy of the Commons”, is presented and discussed. Finally, the existing system of permits and concessions, which impacts the working conditions of U.S. mountain guides, is characterized and analyzed.

U.S. mountain guides and the preservation of the environment

- 5 The study of the requirements for mountaineering activities within National Parks in the U.S. puts forward all the elements suggesting the existence of an approach which aims at sound and sustainable regulation of practices within a natural environment identified as remarkable and thus worth to be protected. In this perspective, from the onset and the foundation of regional mountaineering clubs, U.S. mountaineers have naturally taken part in the protection of their environment. The most emblematic of these clubs is undoubtedly the Sierra Club, originally an alpine club.
- 6 Guiding as a profession was born in the U.S. in parallel with the development of mountain tourism, which started in Colorado at the end of the 19th century (Selters, 2004). In 1899 the Canadian Pacific Railway recruited Swiss mountain guides from Interlaken and settled them in Laggan (Lake Louise, Alberta, Canada) and Glacier House (British Columbia, Canada).¹ The railway company also hired Edward Whymper, who had just made the first ascent of the Matterhorn, to climb Mt. Assiniboine in Alberta. Finally James Outram, another Alpine Club member, made the first ascent.
- 7 The issue of the professional training of these guides rapidly came along. The first small-scale guiding associations appeared at the end of the 19th century, for instance the Adirondack Guides Association. Through this association, local woodsmen were able to provide their guiding services for tourists —the aim of the association being to ensure that these guides were skilled. Paul Petzoldt, a former member of the 10th Mountain Division and a mountain guide in the Grand Teton, Wyoming, was a leading figure of the community of U.S. mountaineers. In the 1960s he founded the National Outdoor Leadership School (NOLS), one of the first organizations offering professional training for guides in the U.S. The first NOLS instructors’ courses were put in place in 1965.
- 8 In the 1970s, as guides started to collectively organize, the profession was mainly made of independent working guides and four main guide services which benefited from concessions with various National Parks: American Alpine Institute, Exum Mountain Guides, Rainier Mountaineering Inc. and Yosemite Mountaineering School. The training

of the guides who were hired by these services was essentially carried out through a “buddy system”. Today, there is no mandatory training or certification for mountain guides in the U.S. This is the reason why the profession is trying to self-regulate and organize, via two associations, the AMGA and the Certified Guides Cooperative (CGC). The AMGA is a 501(c)(3) nonprofit organization, created in 1979, which is managed by professional guides. Until recently, it was the only body in charge of the training of American mountain guides. Today, it remains the only body responsible for the certification of mountain guides, based on requirements complying with the international standards established by the profession (Union Internationale des Associations de Guides de Montagne/International Federation of Mountain Guides Associations—UIAGM/IFMGA). The CGC, a cooperative stemming from the Certified Guides Federation, founded in 2005, represents the U.S. guides who are certified by AMGA or UIAGM standards. It offers its members an access to insurance, more particularly civil liability, and aims at promoting the access of certified guides to the protected natural areas that fall under the system of permits and concessions.

- 9 Accessing protected land is one of the major issues for U.S. mountain guides today. This national issue turned into an international one when the AMGA joined the IFMGA in 1997, as one of the provisions on joining the IFMGA is the principle of reciprocity: “it is one of the main objectives of the IFMGA to make the practice of the profession of mountain guide mutually easier and possible in all the member countries” (UIAGM/IFMGA, 2000, *Standard of the IFMGA*, internal document). In order to make it possible for U.S. mountain guides to work freely in all IFMGA member countries (notably in the Alps), the AMGA should ensure that all foreign IFMGA certified guides are allowed to work on the U.S. territory. Due to the existing system of permits and concessions, this is obviously impossible: it seems then relevant to focus on the issue of the status and the management of U.S. National Parks.

U.S. national parks and Garrett Hardin’s misinterpretation

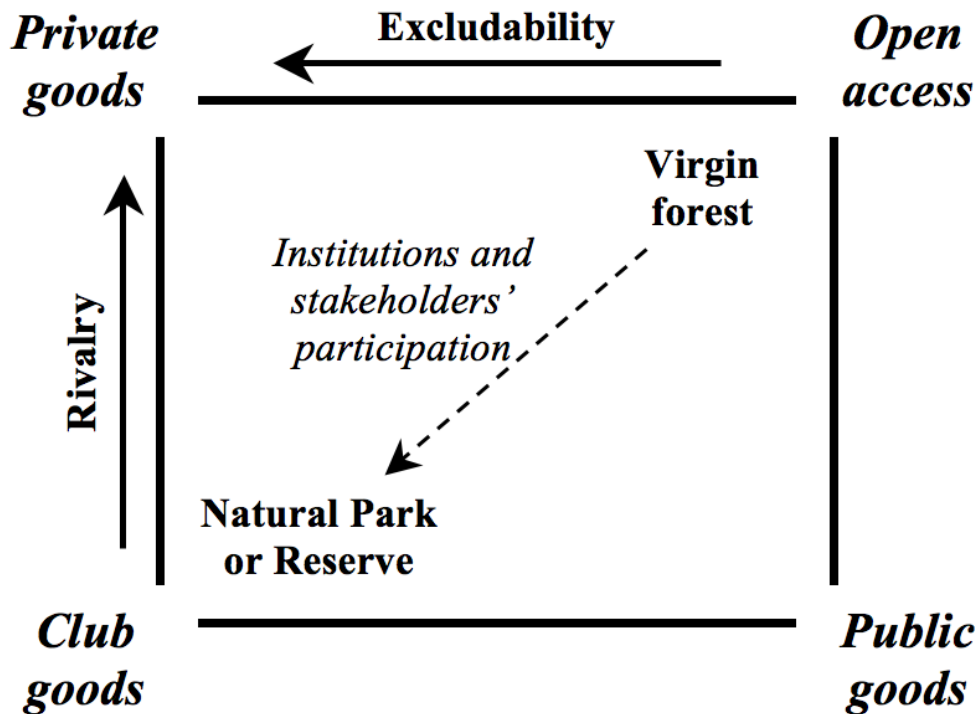
- 10 Garrett Hardin was a specialist in environmental studies. His seminal paper, “The Tragedy of the Commons” (*Science*, 1968) is the cornerstone of further developments in environmental economics, even if it introduces some confusion on the notion of common goods.² So as to avoid this confusion (which is still problematic, see fig. 1), we are introducing two theoretical tools pertaining to a typology of common goods and the different property rights that can be applied in National Parks.
- 11 Following Manning (2007), we consider that Hardin’s paper is fundamental to understand the current debates on parks’ management. In order to present the risks of overexploiting environmental resources, Garrett Hardin illustrates his point with the example of a pasture, where the lack of a collective ruling system leads to a tragedy, i.e., ruin of the commons:

Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all. (Hardin, 1968)
- 12 In order to strengthen his point, Hardin takes the example of U.S. National Parks:

The National Parks present another instance of the working out of the tragedy of the commons. At present, they are open to all, without limit. The parks themselves are limited in extent —there is only one Yosemite Valley— whereas population seems to grow without limit. The values that visitors seek in the parks are steadily eroded. Plainly, we must soon cease to treat the parks as commons or they will be of no value to anyone. What shall we do? We have several options. We might sell them off as private property. We might keep them as public property, but allocate the right to enter them. The allocation might be on the basis of wealth, by the use of an auction system. It might be on the basis of merit, as defined by some agreed-upon standards. It might be by lottery. Or it might be on a first-come, first-served basis, administered to long queues. These, I think, are all the reasonable possibilities. They are all objectionable. But we must choose —or acquiesce in the destruction of the commons we call our National Parks. (Hardin, 1968)

- 13 To his mind, the lack of regulation of the access to National Parks inexorably results in an excessive number of visitors that is damaging the environment (i.e., the well-known “carrying capacity” coordination issue). Nevertheless, this has induced Garrett Hardin to misinterpret the different notions of common property and free-access resources (Wade, 1987; Stevenson, 1991). According to Ciriacy-Wantrup & Bishop (1975), this misinterpretation is partly due to a lack of distinction between the nature of the resource and the regime of property rights supervising its use, even though the same resource may be exploited in the framework pertaining to the different regimes of property rights. In order to deal with this misinterpretation, the various categories of goods and the existing property regimes should be defined first.
- 14 In mainstream economics, goods are conventionally presented following a two-criterion typology: rivalry and excludability. The first criterion characterizes the possibility, for the same unit of a good, to be simultaneously used by two individuals. Thus an individual can use non-rival goods without challenging the right for another individual to use them as well (i.e., landscape). The second criterion, excludability, refers to the situation in which an individual might be excluded from the use of goods once they have been produced. Four different types of goods emerge: (i) *private goods*, which can be considered as rival goods from the use of which an individual can be excluded; (ii) conversely, *pure public goods*, which are non-rival and non-excludable (i.e., national defense). In between these extremes, there are *impure public goods*, which are partially non-rival and/or partially excludable, such as (iii) *common goods*, defined as rival and non-excludable goods (i.e., a common forest or fishing resource) and (iv) “*club goods*” (Buchanan, 1965), defined as non-rival and possibly excludable goods due to potential congestion issues (i.e., a public swimming pool or a highway) (see figure 1).

Figure 1. A typology of goods: rivalry and excludability



SOURCE: BASED ON BOLT ET AL., 2005, P. 2

- 15 Hardin's misinterpretation is still common today, as illustrated in figure 1, issued by the World Bank in 2005 and which reiterates the confusion between open access and common property. Nevertheless, considering their nature, parks are presented as club goods.
- 16 Then, depending on the user or the group of users having the property right, Daniel Bromley (1989) identifies four regimes of property rights, the fourth one appearing as a situation in which no right or duty is established (Bromley, 1989, p. 872):

State property: Individuals have *duty* to observe use/access rules determined by controlling/managing agency. Agencies have *right* to determine use/access rules.

Private property: Individuals have *right* to undertake socially acceptable uses, and have *duty* to refrain from socially unacceptable uses. Others (called "nonowners") have *duty* to refrain from preventing socially acceptable uses, and have a *right* to expect only socially acceptable uses will occur.

Common property: The management group (the "owners") has *right* to exclude nonmembers, and nonmembers have *duty* to abide by exclusion. Individual members of the management group (the "co-owners") have both *rights* and *duties* with respect to use rates and maintenance of the thing owned.

Nonproperty: No defined group of users or "owners" and so the benefit stream is available to anyone. Individuals have both *privilege* and *no right* with respect to use rates and maintenance of the asset. The asset is an "open access resource."

- 17 Taking into account the first typology, National Parks can be considered as impure public goods, which are tantamount to club goods. Indeed in order to tackle the congestion issue (Prato, 2001; Porter, 2004) the NPS decided to implement a system of exclusion equal to a toll (Turner, 2002). Next, the current management of U.S. National Parks is far from that of a free-access *res nullius*: it rather embodies a regime of public property, with private service suppliers under a concession system, "on the basis of merit, as defined by some

agreed-upon standards", as Garrett Hardin put it. Nevertheless, in the present context, many conflicts regarding use develop. At the time of the creation of the National Parks, the exploitation of natural resources (minerals, forests, water...) within these parks seemed absolutely legitimate; the purpose of protecting these natural resources was only made clear later on, accompanied by a concern for promoting tourist access. This situation has resulted in a subtle equilibrium between development and preservation (Byrand, 2007). Since the 1960s, the doctrine of usefulness has been superseded by a more radical doctrine aiming at preserving nature, then the environment and finally, biodiversity (Héritier & Moumaneix, 2007, Dilsaver & Young 2007). Then, the issue of the appropriate level of management arises (Adams, 2002). One major coordination problem is linked to parks' carrying capacity.³ In the next section, we consider the role of mountain guides and their professional practice in the National parks in this perspective.

Accessing and protecting the land: the professional practice of U.S. mountain guides

- 18 In the U.S., visitors have to pay to access National Parks. For instance, the entrance fee to stay in the Yosemite National Park, California, for a week is twenty dollars per car. Booking is mandatory for the tourists who want to lodge or camp in the park during the peak season, and the hikers who wish to stay in the park overnight have to apply for a wilderness permit, which is free. Obviously, this is strange to European climbers, since the phrase *wilderness permit* itself sounds paradoxical, almost an oxymoronic statement. The tourists who want to spend time in the Denali National Park, Alaska, have to pay a ten-dollar entrance fee; each climber who wants to try to climb Mt. Denali or Mt. Foraker has to pay an extra three hundred and fifty dollars and register in advance.⁴
- 19 Mountaineering and climbing themselves are regulated in the parks. In the 1960s, Charlie Bell, who was the first to solo climb the Willis Wall on Mt. Rainier, Washington, had to pay a fifty-dollar fine for having climbed the wall in violation of the park's regulations:
I find it paradoxical that Bonatti got a medal for his Matterhorn solo and I paid a \$50 fine for my Rainier solo; but if I were running Rainier Park, I would surely prohibit myself from doing it again. (quoted in Selters 2004, p. 195)
- 20 Similarly mountain guides' professional activity is strictly regulated in the National Parks, as it is brought within the scope of the system of permits and concessions implemented by the NPS, with the objective of managing service delegation. In order to manage their resources at best, the local park authorities are responsible for awarding concessions contracts (usually for a ten-year period) for each category of activities: "Land managers are federally-mandated but the land is locally-managed. NPS for instance, each manager has his total say on what happens in their parks."⁵ The awarding of concessions in the framework of NPS legal mandates has to follow a pre-established procedure, which has to respect five rules and steps:
 - (i) competitive selection process,
 - (ii) solicitation of proposals, which has to include a *prospectus* describing the type of activity involved,
 - (iii) minimum requirements, most notably regarding environmental protection and the franchise fees paid to government agencies,
 - (iv) commitment to select the best proposal regarding the preceding criteria,
 - (v) for the concessions with an annual gross receipts exceeding five million dollars and a concession period exceeding ten years, notification to the U.S. Congress, i.e.,

the *Committee on Resources* of the House of Representatives and the *Committee on Energy and Natural Resources* of the Senate. (National Park Service 1998: 2-4)

- 21 It is worth noticing that an incumbent concessioner has no preferential right to renew a concessions contract, except in three specific cases including 'outfitter, guide services and small contracts' for safety reasons (National Park Service, 1998). This research was strictly limited to high-altitude mountaineering activities⁶ (alpinism, ski mountaineering and ice climbing): six U.S. National Parks were concerned (see table 1). Regarding mountaineering activities, these parks apply a system of sole (Rocky Mountain National Park, Glacier Bay National Park, Wrangell – St. Elias National Park) or multiple (Denali National Park, Grand Teton National Park, Mount Rainier National Park) concession holders. The system of concessions is consistently enforced and the guides who try to work in the parks with no legal authorization are prosecuted. In 1993 in the Denali National Park for instance, two guides whose clients' lives had been jeopardized were found guilty and condemned to pay fines amounting to 9,100 dollars:

These illegal trips seriously compromised client safety. One client became seriously ill with life threatening HAPE and HACE and would have died had he not been rescued by the Park's helicopter. Another guide abandoned two clients and allowed them to wander around unroped in extremely hazardous terrain. They also suffered from frostbite. (National Park Service, 1993)

Figure 2.: List of authorized concessioners

National Park	Concessioners
Denali National Park, Alaska	Alaska Mountaineering School, Alpine Ascents International, American Alpine Inst., Mountain Trip, National Outdoor Leadership School, Rainier Mountaineering
Glacier Bay National Park, Alaska	Alaska Mountain Guides and Climbing School
Grand Teton National Park, Wyoming	Exum Mountain Guides, Jackson Hole Mountain Guides, National Outdoor Leadership School
Mount Rainier National Park, Washington	Alpine Ascents International, International Mountain Guides, Rainier Mountaineering
Rocky Mountain National Park, Colorado	Colorado Mountain School
Wrangell – St. Elias National Park, Alaska	St. Elias Alpine

Source: National Park Service, 2010

- 22 Today this system is criticized by many stakeholders, but it seems difficult to put it into question. When asked, concession holders highlight how complex and cumbersome it is ("pages and pages", "it's a mess!", "it's a lot of paperwork")⁷ but are reluctant to promote any changes as they benefit from the rent income. Park managers share the same point of

view as the existing system makes their control and supervision procedures easier. Some guides with insufficient or no professional training may indeed put their clients' lives in danger:

In general, it serves the federal system well in that ... for bureaucracy it makes management easy: there is one place to go for complaints, you can make sure that one concession is hiring guides who meet your qualifications, who are aware of the environmental aspects of the job, if the public complain you tell them where to go.⁸

- 23 Even though the existing system of concessions promotes environmental protection (e.g., by making the implementation of *Leave No Trace* policies easier) and safety, it impedes the professional practice of U.S. certified mountain guides, and thus the professionalization of mountain guiding in the U.S. (Wozniak, 2011). Moreover, it makes the application of the IFMGA principle of reciprocity impossible. We can note that the North Cascades National Park Complex, Washington, which includes Ross Lake and Lake Chelan National Recreation Areas is one of the few exceptions: all mountain guides can work there, provided they obtain a *Commercial Use Authorization* (CUA).

Conclusion

- 24 In the perspective of the framework set by Garrett Hardin, characterizing National Parks is complex. From a theoretical standpoint they are club goods. Nevertheless, from a symbolic standpoint, these parks are public goods with a nonuse value (intrinsic value) that takes part in the sustainability of U.S national values⁹ and heritage:

National parks have *nonuse values* if people get satisfaction from knowing that parks exist, even if they have never visited them and never plan to visit them. By their nature, goods with nonuse values are pure public goods: There is no way to exclude individuals from getting nonuse values, and one individual's value is unaffected by the fact that others are also getting nonuse values from the same resource. There are several possible sources of nonuse values of national parks. Historians of America's national parks emphasize the parks' importance in developing a national identity through the preservation of nature [...]. (Turner, 2002)

- 25 The theoretical developments in terms of common pool resources (Ciriacy-Wantrup & Bishop, 1975; Ostrom, 1990) and common heritage (Petit & Romagny, 2009) reflect their strong link with institutional economics broadly speaking and pave the way for a new approach of natural resources management. By establishing the foundations of a different analytical framework that constitutes an alternative to the market model (promoted by Milton Friedman in the case of parks), they go beyond the pessimistic vision of the tragedy of the commons and the biased interpretations of many economists. As the case of the management of fixed anchors by the Action Committee for Eldorado (Eldorado Canyon State Park, Colorado) shows, each park might benefit from the implementation of collective management policies of the resource (Adams, 2002). This system would, at the same time, involve local park managers, certified mountain guides' associations and other users in order to define efficient regulations for access and use.

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NOTES

1. "The railroad paid them subsistence wages and required them to entertain the media, travel in Swiss folk costumes, and do menial work when not engaged with guests". (Selters, 2004)
2. Hardin himself corrected this error, by suggesting that the title of his famed paper should be edited so as to mention "unmanaged commons" about open access goods (Hardin, 1991).
3. Taking as a starting point the same quote from Hardin as we did, Robert E. Manning (2007) produced a well-documented study on carrying capacity problems in the parks.
4. In a letter sent on September 7th, 2010 to Jon Jarvis (NPS Director), the executive directors of the Access Fund, the AAC and the AMGA protest against a plan of the NPS to increase mountaineering fees from two hundred to five hundred dollars per climber in the Denali National Park and from thirty to fifty dollars in Mount Rainier National Park, Washington.
5. Phone interview with Margaret Wheeler, AMGA President, July 8th, 2009.
6. Even though we kept in mind that mountain guides' professional practice includes other activities, such as rock climbing for instance.
7. Extracts from emails and interviews with former and present concession holders, February-July 2009.
8. *Ibidem*
9. Regarding the national value of National Parks for U.S. citizens, see Hazen, 2008.

ABSTRACTS

This paper aims at presenting the stakes related to the access to protected land in the United States and to its conservation, through the analysis of the professional practice of U.S. mountain guides. From a methodological standpoint, this research is based both on a theoretical analysis grounded in the field of environmental economics and on an empirical study. The authors' starting point is Garrett Hardin's paper, “The Tragedy of the Commons” (*Science*, 1968), even if it introduces some confusion on the notion of common goods. So as to avoid this confusion, the authors use two theoretical tools pertaining to a typology of common goods and the different property rights that can be applied in National Parks. Finally, they apply this framework to the observations made on the field in Colorado in July 2009.

INDEX

Keywords: national parks, mountain guides, common goods, environment

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